

**Abstract of the Disclosure**

In a method of manufacturing a semiconductor device, a flexible tube connects at least part of a path extending from a reaction chamber to a detoxification device through a vacuum pump. The flexible tube has a tube body made of hard material, the tube body having projected parts and depressed parts and a cover provided over an outer surface of the tube body, the cover being made of elastic material, the cover being in contact with around the projected parts of the tube body and formed over the depressed parts of the tube body so that a vacant space is formed between the tube body and the cover. Then, a semiconductor substrate is disposed within the reaction chamber. The vacuum pump is activated to bring the reaction chamber into a pressure-reduced state. A reaction gas is supplied to the reaction chamber. Finally, the reaction gas causes to react to thereby deposit a reactant on the semiconductor substrate.